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ORIGINAL COMMUNICATIONS.

SPINAL CONGESTION AND LOCOMOTOR ATAXIA.

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SPINAL congestion is a condition which, though long recognized by neurologists, is yet by the mass of the profession usually ignored, or confounded with various other diseases. It is unfortunate that this disease is not more correctly and thoroughly described in lecture-rooms and in our text-books of general medicine, for these reasons: 1. It is an affection not infrequent, and, as it sometimes comes on suddenly, it is likely to fall under the observation of the general practitioner. 2. It is very susceptible of treatment, provided that treatment be judicious. 3. When neglected, or improperly treated, it sometimes goes on to serious and incurable structural lesions of the cord, with the symptoms of permanent paralysis of motion, or of sensation, or of both.

There is no *one* symptom that certainly indicates spinal congestion; but there are a large number of symptoms which, when taken together, and studied with the history of the case, will enable us to make out the diagnosis with perhaps as much accuracy as we are wont to make out the diagnosis of congestion of the lungs or the first stages of pneumonia. The group of sensory and motor symptoms that are caused by spinal congestion is as follows. I give them in their anatomical order, rather than according to the degree of their relative importance:

1. *Headache.*—The pain may be on the back, or top, or on the front part of the head. The nerves that ache are those which take their origin in the cervical region of the cord or in the lower part of the brain. There may be tender points in the crown, or on the forehead, or on different parts of the back or sides of the head.

2. *Stiffness of the neck, with tenderness and pain in the cervical vertebræ.*—This stiffness may be so great as to suggest the idea of rheumatism, or a common cold; and patients thus affected frequently say that they have taken cold, or that they have the rheumatism in the neck. On attempting to turn the head, pain arises, and sometimes the patient acts as though he had torticollis, or wry neck, which is an entirely different affection. To superficial observation the patient gives every appearance of being a sufferer from muscular trouble, and it is no strange thing that this affection so often passes for rheumatism. The muscles, however, have nothing to do with the matter, nor have the nerve-branches. The disease is in and around the cord, and it is in and around the vertebræ that pain and tenderness appear.

3. *Heat and pain down the spine, with or without tenderness.*—In certain stages, when the congestion is of a subacute character, the pain and heat do not appear, or, at least, are not constant. The heat and burning are not confined to the narrow region of the vertebræ, but radiate all over the back. Over-exertion, as long standing or walking, or a sudden shock or blow, or the strain of lifting, or the recumbent position, usually aggravates the pain and heat in the back.

4. *Feeling of pressure on the chest.*—This symptom, which to my mind is quite an important one, seems to have been overlooked by writers on the subject. The "feeling of pressure" is one that patients, even when not questioned, frequently speak of, and it suggests, almost always, spinal-cord trouble, though not necessarily of a grave character. Patients in localizing this symptom usually place the hand on the lower part of the breast-bone.

5. *Dyspnœa and palpitation.*—These symptoms would very naturally arise from severe congestion of the dorsal region of the cord, and in a mild form are not uncommon.

6. *Feeling of constriction around the abdomen.*—This symptom has long been recognized. It is, however, not peculiar to spinal congestion, as such. In actual sclerosis of various kinds it also appears, and it is by no means constant.

7. *Bladder and rectal disorders.*—Incontinence with dribbling of the urine, constipation, or diarrhœa, may occur. Constipation is more frequent than diarrhœa. Amazing and persistent flatulence, with rumbling in the bowels, is a symptom that I have often observed.

8. *Excessive sexual excitement, with erections and emissions.*—Sometimes the sexual desire is very annoying, and the capacity for sexual intercourse is increased to an extent at once astonishing and alarming. Patients deceive themselves quite often with the belief that this sudden torrent of sexual desire is a sign of health; but, when read rightly, it is a sign of weakness rather than of strength: it is pathological, not physiological. It is analogous to the startling activity and brilliancy of the brain that sometimes precede insanity, or to the ferocious and gnawing appetite that attends the early stages of dyspepsia. Excessive functional activity is a characteristic, not of health, but of disease.

9. *Sensory and motor disturbances, of a mild character, in the upper and lower limbs.*—There may be mild hyperæsthesia or anæsthesia,—that is, excessive tenderness in the soles of the feet, or in the fingers, or over the whole surface of the limbs,—or the reverse condition, slight and varying numbness, a feeling as though the limbs were asleep, or just being roused from sleep, as when we first rise after long sitting in a hard chair. A frequent symptom is a *feeling of heat* and *burning* in the bottoms of the feet,—a sensation as though the patient were stepping on straw, or rubber, or velvet. Then there may be sudden constrictions of the ankle or thigh, as though a cord were tightly drawn about them.

Neuralgic pains of a sharp, shooting, boring, stabbing character run up and down the limbs, and are felt especially in the borders of the feet, sometimes in the arms and thighs.

Among the mild motor symptoms are twitchings of the muscles or of parts of the muscles, the so-called fibrillary contractions. These involuntary contractions of the muscles have been supposed to be diagnostic of progressive muscular atrophy; but this is a serious error, and one that should be corrected as rapidly as possible, for progressive muscular atrophy is a very solemn disease, that generally, though not always, means death. But these fibrillary contractions occur in thousands of cases that never have another symptom of progressive muscular atrophy.

Jerking of the body or of the limbs on going to sleep is a symptom that sometimes alarms the patient more than it ought to, but is really quite inconvenient, and sometimes makes it very hard to get to sleep. Sometimes the body is apparently thrown up from the bed and comes down with a jar and a bounce. When these jerkings are very mild they do not always wake up the patient, provided he is sound asleep.

To all this indictment may be added a weakness in walking, especially in going up-hill or in ascending stairs. Sometimes it is more wearying to stand than to walk. The concussion of riding in springless wagons usually increases all these symptoms. In walking, the patient sometimes feels as though he were wading knee-deep in water.

10. *Fixed paralysis of motion or sensation, or of both, in the limbs, with or without muscular contractions.*—This condition occurs only in very bad or much-neglected cases. When it does occur, it may be accompanied by bed-sores that are hard to heal. The electro-muscular contractility will be diminished, and the æsthesiometer may indicate great anæsthesia.

In looking over this list of symptoms, it is clear that they may, nearly all of them, be referred to disturbance of the nerves of motion or of sensation; which disturbance is due to the compression of the roots of the nerves in the cord, and to the changes in innervation that result from the presence of too much blood in the nerve-centres. A radical and ever-recurring difficulty in making the diagnosis is found in the fact that nearly all of these symptoms, or at least very many of them, may come from precisely the opposite condition, *anæmia*, with exhaustion of the cord. Excess of blood and deficiency of blood in the brain or in the spinal cord express themselves by the same manifestations. How shall we distinguish? He who says that it is never a difficult matter to make the distinction, is either a very great genius or a very great fool. I know of no single disease in the department of neurology that offers so good a test of diagnostic skill as this: he who has mastered this will find the other and graver lesions, so far as they are known, comparatively simple. There are several general facts which, if they are kept in mind and well considered, will help us to obtain a reasonable certainty.

1. *The history of the case.*—Active and fixed spinal congestion usually gives a history of exposure to cold or injury of some sort, that would explain the symptoms. To get this history, we must frequently inquire into the life and habits of the patient months, if not years, previous. Symptoms that come from exhausted and anæmic cords cannot be referred usually to any exposure, although they may be aggravated by falls or blows or over-exertion.

2. *The symptoms coming from spinal congestion are more or less fixed and permanent, and are usually worse when the patient is in a recumbent position.*—The patient with spinal congestion is apt not only to be worse at night, but in the morning, or sometimes, I have observed, for several hours after rising. Cords that are simply exhausted are oftentimes relieved by recumbency; though this rule is not so invariable as has been claimed. The symptoms of exhaustion are fleeting, changing and uncertain—to-day they are here, to-morrow there; and to a degree the same is true of the *early* stages of spinal congestion, but not of the later stages.

3. *Spinal congestion is more likely to occur in the sanguine, bilious, and lymphatic temperaments; exhaustion, in the nervous temperament.*—Patients who are generally anæmic and nervously exhausted, and in whom anæmic murmurs can be detected, would be more likely to suffer from exhausted cords than those who are plethoric and hardy. I have long observed that the *majority* of my cases of spinal congestion and the degeneration to which congestion leads are more frequent *by far* among the sturdy and muscular than among the delicate and nervous.

4. *The female sex is less disposed to congestion of the spine than the male sex.*—When a woman presents the symptoms above described, there is a presumption that exhaustion, and not congestion, is indicated. Then the graver forms of spinal-cord disease are less frequent among women than among men. Of ataxic patients, take them as they come in all ranks of society, there are ten men to one woman. I would account for this comparative exemption of women, *first*, by the fact that the nervous temperament prevails in them far more than in men; and *second*, by the fact that they are much less exposed to wet and cold and to those violent mechanical injuries that excite congestion.

5. *The tenderness over the vertebræ is usually much greater when the cord is exhausted than when it is congested.*—In the so-styled spinal irritation, when exhaustion, with anæmia or alternations of anæmia and hyperæmia, constitutes the probable pathology, the vertebral tenderness is frequently very pronounced, as every physician knows. The hyperæsthesia is so great that the touch of the hand can scarcely be borne. In spinal congestion, this *extreme* tenderness is rarely if ever seen. Tender points can very often, if not usually, be detected in the middle dorsal and middle lumbar vertebræ when sufficient pressure is used, in the various stages not only of congestion, but of sclerosis of the cord. The fancy which some have advocated, that in serious and organic lesions of the cord tenderness of the vertebræ does not exist, has only this basis of fact, that tenderness tends to diminish as the disease of the cord passes from the irritative and functional to the structural and incurable stages; and yet I have seen

not a few hopeless cases of ataxy and of progressive muscular atrophy, where the tenderness of the middle dorsal and lumbar *vertebræ* was not at all difficult to find.

6. *The results of treatment.*—In some cases it is impossible to decide beyond misgiving whether fixed congestion or simple exhaustion is the pathological condition. All the tests above presented fail us, and we are left in doubt, or if not in doubt we may be mistaken. Here comes in the final test,—the result of treatment. The treatment of spinal congestion in an active state is essentially different from the treatment of exhaustion purely; and according as the patient improves or grows worse may we judge whether we are right in our diagnosis. Dr. Sterling tells me that in a case where all the symptoms and history pointed to anæmia of the cord, treatment by phosphorus and strychnine did no good, and some harm; on turning right-about-face and using ergot in large doses, improvement began at once. Strychnine is a remedy of such peculiar power, and has so marked an action on the spinal cord, that it becomes a most excellent means for revising our diagnosis; a few doses may bring forth evil fruit and force us to look elsewhere for relief. Similarly, ergot, when given in large doses, will sometimes tell us in a few hours whether it is or is not the remedy that is wanted. I have seen cases where ergot in the course of two days aggravated all the symptoms, and I have seen cases where it relieved pains connected with spinal congestion in less than two hours.

You will observe that throughout this résumé of the symptoms and signs of spinal congestion I have kept in prominence constantly, at every step, the *radical distinction between a congestion* of the cord of *an active and fixed character, and a simple hyperæmia of a passive transient* character, resulting *from exhaustion, and alternating*, it may be, *with anæmia.*

In spinal exhaustion, there may be very likely a disproportionate quantity of blood in the cord or in some portion of it, especially after over-exertion; but this is a very different state from a permanent and active congestion. It occurs, as I have stated, in very different kinds of temperament, and requires different treatment. In any anæmic, neurasthenic patient, local and temporary congestions may occur in any part of the exhausted nerves: waves of hyperæmia may settle in the lower part of the cord, in obedience to the law of gravity, which the enfeebled vessels cannot resist. Those who have examined the retinas of nervous patients with the ophthalmoscope know how slight an influence is necessary to change the vascular condition of the fundus, how readily the veins and the arteries enlarge and contract under irritation.

Travellers by the region of Lake George are pointed out by the highway near Ticonderoga a natural curiosity in the shape of a double tree: there are two trunks, growing so closely together that they appear to be simply large branches of one tree; but at a distance from the ground they separate, and the one rises into an oak, and the other, I believe, into an elm. Thus it is with functional and organic diseases of the nervous system. They begin with symptoms so similar that they appear as one, and for some distance in their course they can scarcely be distinguished; but careful study will show that they soon begin to diverge, and in time they diverge so widely that they have little or nothing in common. One goes on to severe disease, perhaps to death; he who is affected with the other may die at any time, but he never dies of that disease. A man may die with a functional disease, but he will not die of it; the disease may be upon him, and he die, but it is not that which kills him.

Treatment.—The treatment of fixed and active spinal congestion consists in the proper use of electricity, especially of the galvanic current,—in the form of central galvanization, if one chooses; and, if other associated symptoms require it, in the form of galvanization of the spine,—and the free use of ergot or iodide of potassium. Faradization with a pleasant and gentle current is also of value in spinal congestion, though usually it is inferior to galvanization. Both currents—faradaic and galvanic—have a most powerful *contracting* influence on involuntary muscles, as I have shown by a large number of experiments on dogs, rabbits, and on the dead subject. I have experimented with both currents on the involuntary muscular fibre of the intestines, the stomach, bladder, and spleen, and have confirmed repeatedly the statements which have been made in regard to the contracting power of electricity on these organs. I have further shown that the contraction takes place at both poles, as well as with both currents, and it consists in a steady and gradual drawing together of the muscular substance without *any immediate* relaxation; in this respect involuntary muscles act very differently from voluntary muscles, which—except when they are greatly fatigued—relax immediately after contraction. The effect of the contraction is a diminution in size of the organ that is acted on. Now, as the blood-vessels contain involuntary muscular fibre, their diameter must be diminished by electrization, and in this way congestion may be relieved.

I have found out in my researches—what I believe has not been before observed—that the positive pole has a stronger contracting influence on involuntary muscles than the negative pole. This differential action applies to both currents, and, so far as I can judge, without regard to the direction of the current. This fact, taken in relation with the fact that the chemical effect of the positive pole is less active than that of the negative, would explain, in part, the fact which I think I have observed,—that the positive pole is the more efficacious in treating spinal congestion. The influence of current-direction in the treatment of this and of other affections of the cord has been overdrawn. It may, indeed, be doubted, and for myself I do most seriously doubt, whether there is any such differential action between the ascending and descending currents as has been claimed. Without arguing the details of the subject here, I may say that all observation accords with physics and physiology in making the *polar* action more prominent than the effect of current-direction.

(To be continued.)

A CASE OF HYDROPHOBIA.

BY JOHN KNIGHT, M.D.

AT 9.30 P.M., October 12, 1873, I was called to see Henry W., aged 11 years. The messenger supposed him to be suffering from hydrophobia.

I found the patient sitting on a chair by the stove, complaining of headache, inability to spit, feeling of constriction of throat and chest. Pupils widely dilated. Pulse wavering, and so rapid that I was not able to count it. Skin hot and dry. Tongue parched, and much swollen, of a bluish color, showing a high state of congestion. I found a punctured wound on the inner surface of upper lip opened, the boy having been bitten in the lip and nose. The latter wound had healed kindly, and showed no signs of any injury. He made frequent attempts to clear his throat, making a noise as any one would who had a fish-bone in the throat,—which the bystanders called barking,—followed by ineffectual efforts to spit, there being no saliva about his mouth; then convulsive action of muscles with tendency to opisthotonos, but not hard enough to throw him off his chair. He had not swallowed anything since the previous morning at breakfast, but had constant thirst, and asked for a drink. I told his mother to get him a glass of water, that I might see what effect it would have. While she was getting the water off a table close by, he rose up, seeming to prepare himself for a struggle. As she came towards him he made a bound, caught the glass with both hands, forced it to his mouth, got a mouthful, but was unable to swallow one drop; it all flowed out of his mouth, and he went into a convulsion. That effort to get a drink was the most desperate I ever saw a human being make to accomplish any purpose. He not being able to swallow, I concluded to quiet him by injections; prepared an enema of starch-water containing one-half drachm of chloral, with one grain morph. sulph. When I would touch him with the nozzle of the syringe he would have a convulsion. After several attempts, I succeeded in throwing into his rectum about three-fourths of my solution, which had a very happy effect on the paroxysms, they being neither so frequent nor so hard; stopped all clearing of his throat and efforts at spitting. While the effect of the enema was at its height, he was able to take two swallows of water,—the first he had drunk for forty hours,—and in a few minutes he took two or three swallows more. Sometimes the sight of water would excite a convulsion, and again, being merely repulsive to him, he would turn his back, and make a motion to put it away, with his hands.

At 2 o'clock A.M., the convulsions having returned in force and frequency, I repeated the enema, with the same quantity of chloral and one-half grain of morphia, then went home. Visited him early in the morning; found he had died about 5 o'clock, in a convulsion. His mother informed me he had lain quiet until the convulsion in which he died.

This boy was bitten by a rabid dog on the 13th of September, at 8 A.M.; at 4 P.M. was admitted into one of our hospitals, where the opinion was given that, it being only a trifling affair, and several hours having elapsed since the biting, it was not necessary to do anything but watch the case.

On the 15th he escaped from the institution and went home, where no attention was given to his case until I saw him, the night before his death. Upon closely questioning his mother, a most ignorant Irishwoman, I find she saw nothing amiss with her boy until the night of the 9th of October,—twenty-six days after the biting. He was restless, unable to sleep well. Friday he was fretful and quarrelsome, and at night rested worse than on the preceding one. On Saturday he ate a little breakfast,—his last; was cross, uneasy; kept moving about from place to place; quarrelled with the other children; slept none at night; had his first convulsion on Sunday morning; kept moving all day from place to place.

My main object in placing this case before the profession is to call their attention to the fact that it is better, when called to such a case, to use every known means to prevent the system being poisoned by the virus, though several hours or days may have elapsed since the injury.

The period of incubation in this case being prolonged to twenty-six days shows that the virus was not taken up by the absorbents for several days after the biting.

FOX CHASE, 23d WARD, PHILA.

THE DISTRIBUTION OF NERVES IN REFERENCE TO NEUROTOMY.

BY HENRY C. CHAPMAN, M.D.

EVERY student of physiology will follow up with interest a case of neurotomy, both as regards its therapeutic effects, and in reference to its offering a test for our knowledge of nerve-distribution. It was with great pleasure, therefore, that I began to read an article on "Neurotomy" which appeared in the *Medical Times* for December 6. Candor compels me to admit, with great respect, however, that certain statements soon excited in me feelings of astonishment, and that I finished the article with the impression that if Dr. Mitchell was right, all the anatomists were wrong. Dr. Mitchell says, "Take, for instance, Flower's Atlas, or most of the anatomies, and you will see the median innervates this area, and the ulnar that, and so on, while in truth *this surface anatomy is a fiction*, and has to be studied anew, by closer dissections and by utilizing such nerve-sections as are made in man." As proofs of this extraordinary assertion, the doctor mentions several cases in which the radial, ulnar, and median nerves were involved. I will therefore give as brief an account as possible of the distribution of these nerves, as accepted by anatomists, and trust that the diagram, kindly furnished by Dr. Leidy, will sufficiently illustrate the subject. I will try to show, so far from the surface anatomy being a "fiction," that, not only in its general features, but in detail, it has been made out correctly for years, and that the accepted anatomy perfectly explains the phenomena which seem to have caused perplexity to Dr. Mitchell.

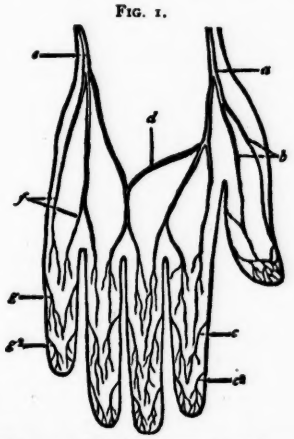
By looking at Fig. 1, we see that the back of the hand is supplied by the dorsal digitals of the radialis, dorsalis ulnaris, and their anastomosing branches; the thumb and the index-finger, by a digital of the radialis; the radial side of the middle finger, by a digital of the radialis; the ulnar side of the ring-finger, by the digitals of the dorsalis ulnaris; while the adjacent borders of the middle and ring fingers are supplied by digitals coming from an interlacing of the radialis and dorsalis ulnaris;* the little

* These nerve-filaments supplying the adjacent borders of the middle and ring fingers are subject to variation.

finger is supplied by the digitals of the dorsalis ulnaris.*

In nature these digital nerves extend through anastomotic filaments to the last phalanx; in Fig. 1, however, they are represented as terminating rather abruptly in about the middle of the finger: this has been done purposely, with the object of bringing out distinctly the important fact that the

FIG. 1.



BACK OF THE HAND.—*a*, Radialis; *b*, dorsal digitals; *c* and *c2*, first and second dorsal ramus of median palmar digitals; *d*, anastomoses of radialis and dorsalis ulnaris; *e*, dorsalis ulnaris; *f*, dorsal digitals; *g* and *g2*, first and second dorsal ramus of ulnar palmar digitals.

ends of the fingers are supplied by the dorsal rami of the palmar digitals of the median and ulnar nerves, as well as by the digitals of the radialis and dorsalis ulnaris.

By looking at Fig. 2, representing the index-finger in profile, we see that the palmar digital of the median, after giving off its first dorsal ramus, divides at the last phalanx into two branches, the upper one, or the second dorsal ramus, supplying the part beneath the nail; the lower branch terminating in the tip of the finger. These first and second dorsal rami of the palmar digital of the median, seen in profile in Fig. 2, are the nerves seen supplying the back of the index-finger in Fig. 1, and which in nature anastomose with the dorsal digital branches of the radialis; the end of the middle finger is supplied by the dorsal rami of the palmar digitals of the median, which anastomose with the digitals coming from the radialis and with the filaments coming from the interlacing of the radialis and dorsalis ulnaris; the end of the ring-finger is supplied on its radial side by the dorsal ramus of the palmar digital of the median,

FIG. 2.

SIDE VIEW OF THE FINGER. — *a*, Palmar digital; *b*, first dorsal ramus of palmar digital; *c*, second dorsal ramus of palmar digital.

which anastomoses with the filaments coming from the interlacing of the radialis and dorsalis ulnaris, on its ulnar side by the dorsal ramus of the palmar digital of the ulnar, which anastomoses with the digital of the dorsalis ulnaris; the end of the little finger is supplied by the dorsal rami of the palmar digitals of the ulnaris, which anastomoses with the digitals of the dorsalis ulnaris. It is to be understood, also, that the nerves supplying the radial and ulnar borders in each finger intercommunicate through anastomotic filaments. Such is substantially the account given of the usual distribution of the radial, ulnar, and median nerves in the works of Leidy, Quain and Sharpey, Holden, Gray, Hirschfeld and Leveillé, etc., and the correctness of which, according to my knowledge, has never been questioned by an anatomist of reputation. According to Dr. Mitchell, however, there has been a conflict of opinion among the clinicians and physiologists, and "the anatomists are in part responsible for the clinical difficulty. Take, for instance, Flower's Atlas or most of the anatomies." We are surprised at any one referring to Prof. Flower's Atlas as an authority on this particular point, since it is admitted in the preface to that work "that the plates are only diagrams or plans, and that in reducing to a plane surface objects which in reality are superimposed at various distances, and which sometimes cross one another, their mutual relations and proportions must often be disarranged." While therefore the atlas of the eminent anatomist Prof. Flower may serve very well for its purpose, its plan of construction necessarily renders it almost useless in reference to the distribution of the nerves as regards a question of neurotomy. Further, in support of statements concerning the anatomy of the nervous system, it will not suffice to quote one English authority and refer vaguely to "most of the anatomies."

Any one at all conversant with scientific literature well knows that a thorough investigation of any subject demands the careful study of many authors. As regards biology, of the German writers, especially, Prof. Huxley says, "Ask the man who is investigating any question profoundly and thoroughly, be it historical, philosophical, philological, physical, literary, or theological, who is trying to make himself master of any abstract subject (except perhaps political economy and geology, both of which are intensely Anglican sciences), whether he is not compelled to read half a dozen times as many German as English books." In reference to this particular anatomical question, however, to do justice to the English anatomists, we call attention again to the excellent works of Gray, Holden, Quain and Sharpey, which are readily accessible to every American student. Imperfect knowledge of foreign languages is, therefore, no excuse for ignorance on the subject of anatomy. Supposing that our brief exposition of the nervous distribution in the hand is correct, let us now examine the phenomena noticed by Dr. Mitchell, and see if they do not entirely confirm what has long been known of the nervous system of the upper extremity. In speaking of Dr. Maury's very inter-

* To avoid confusion, the external and internal cutaneous nerves are not represented in Fig. 1.

esting case, the division of the brachial plexus for a painful cutaneous affection, Dr. Mitchell says, "At first the posterior and inner cords were cut, and the patient was allowed to become free of the effects of the ether. To my surprise, he still had touch-sense in the palm and dorsal surface of the hand, forearm, and arm, and on the inner face of the arm." I do not understand why there should have been surprise that "the palm and dorsal surface of the hand, forearm, and arm" should have retained touch-sense, so long as the external cord remained uncut, since the external cord forms part of the median and the external cutaneous, the very nerves supplying the parts which retained the touch-sense. Indeed, I should have been surprised had it been otherwise. As regards the "inner surface of the arm," the influence of the intercosto-humeral must be remembered. Dr. Mitchell says, "Sometimes the median, for example, innervates the palmar face of the thumb, the index-, and half of the second finger, sometimes extends over the whole face of the latter, and very often reaches the line given in Flower's plates, which carry it up to the middle of the face of the third finger." So far from this being "sometimes" and "very often" the case, it is almost invariably the arrangement, not only in man, but in quadrumana, carnivora, and in pentadactyles generally. This general agreement of nerve-distribution in five-fingered animals is very important, since the wider the field of our observation the more reliable will be our conclusions.

I do not think it necessary to give a diagram of this arrangement, since it may be seen in any anatomy. In reference to the median nerve, it is an interesting fact that in man it has been observed to pass through the internal condyle of the humerus. This abnormal arrangement is quite normal in felines and some other mammals,—an illustration of the general law that what is abnormal in man is often normal in lower animals.

To continue: Dr. Mitchell, in speaking of variations, observes, "The radial nerve has been cut, and has left in one case so large a degree of feeling on the dorsal surface of the hand that neither the patient nor the physician could perceive that there was any loss at all." Is there any cause of astonishment here, when one remembers that, supposing the radial was cut, the back of the hand would still be supplied by branches of the external and internal cutaneous dorsalis ulnaris and the interosseous nerves?

According to Dr. Mitchell, "a year ago, if a surgeon had been asked to cut a nerve to relieve a local injury on the extremity of the dorsum of the index-finger, he would, without doubt, have cut the radial; and yet, as we now know, the median may have been equally or more to blame." The least I can say of such a surgeon is, that he would have been pitifully ignorant of elementary anatomy.

Once more, and I cease to tire the reader with details familiar to every anatomist. "Doubts of like nature would arise if the cause to be quarantined by nerve-section lay in the third finger, because sometimes that part is fed by the median, sometimes by the ulnar, at times by both." The third finger is always supplied by the digital branches of the dorsal rami of the median and ulnar, the digitals of the dorsalis ulnaris, and almost always by filaments which come from the interlacing of the radialis and dorsalis ulnaris. We repeat, this last disposition of these interlacing filaments is subject to variation. Personally, I cannot understand why the phenomena noticed by Dr. Mitchell caused confusion; indeed, I must say that the perplexities of our clinical and physiological friends in reference to this subject remind me of what the celebrated metaphysician Berkeley says of his favorite study, "We have first raised a dust, and then complain we cannot see." I do not wish to leave the reader with the impression that I consider the structure of the nervous system has been exhaustively studied. On the contrary, as Prof. Henle observes in his classical work, "Handbuch der systematischen Anatomie des Menschen," p. 500, "Superficial physiological experience confirms the result of anatomical investigation. Modern surgical transactions have still brought to light facts upon the nerve-commissures which prove that the course of the fibres is not so simple, and our knowledge of the same is not finished. However, for our object this question may remain unsettled, for Richet's observation alone suffices to show that the fingers do not receive their sensible fibres solely from branches which extend straight to them."*

While I admit that no doubt, from time to time, there will be additions to our knowledge, I cannot endorse any such sweeping statement as "this whole surface anatomy is a fiction, and has to be studied anew." As regards learning the distribution of nerves, Dr. Mitchell seems to consider that cold, pressure, and electricity serve as means of investigation. It is with very great diffidence that I offer any criticism to these statements, as well as those above mentioned, of such an esteemed physiologist as Dr. Mitchell. I must say, however, that it appears to me, admitting the free anastomoses of nerves, that any result based on such a mode of experimentation would be very unreliable, and that inflicting pain lets in an abnormal condition, which will further vitiate, more or less, the conclusion. No subject illustrates better than the pathology of the nervous system not only the importance, but also the absolute necessity, of the thorough study of anatomy and physiology. Consider the vast amount of pathological data that remained for years almost useless on account of the healthy condition of the nervous system being so little understood. It appears to me that the medical profession, in their studies, begin where they should end: studying disease before health. In every other science the study of the normal precedes that of the abnormal,—the simple that of the complex. Why, therefore, in the most difficult of

* "Die oberflächlich physiologische Erfahrung bestätigt das Resultat der anatomischen Untersuchung. Doch haben die neuerlichen chirurgischen Behandlungen über die Nervennath Thatsachen zu Tage gefordert, welche beweisen das der Faserlang nicht so einfach und unsere Kenntniss desselben noch nich abgeschlossen ist." After noticing the observations of Beclard, Paget, Schiff, Laugier, Houell, Richet, in reference to the uniting of nerves after division, Prof. Henle continues at p 501, "Indess darf für unseren Zweck diese Frage unerledigt bleiben, da Richet's Beobachtung allein genügt um zu zeigen dass die Finger ihren sensibeln Fasern nicht lediglich aus den Aesten empfangen welche sich geraden Wegs zu ihnen erstrecken."

all studies should they use a method not found successful in the cultivation of the sciences?—in the words of one of the deepest thinkers of this century, the late Mr. Buckle, "physiology is the basis of pathology, and the laws of disease are to be raised not from the phenomena presented in disease, but from those presented in health: in other words, pathology should be investigated deductively rather than inductively; and morbid anatomy and clinical observations may verify the conclusions of science, but can never supply the means of creating the science itself."

CURIOSITIES OF COUGH.

Reported to the Medical Library and Journal Association, December 12, 1873,

BY L. ELSBERG, M.D.,

Professor of Laryngoscopy and Diseases of the Throat in the University of New York.

(Continued from page 246.)

III.—July 14, 1873.—Miss H. R., of Philadelphia, æt. 18, of healthy family, though small and delicate herself, weighing only ninety-three pounds, "got a cold in the head" during November, 1872; it lasted two or three weeks, and ended with a curious little vocal hack of a cough that has remained ever since. Except during sleep, she has this peculiar cough—if it is to be called a cough—every two or three seconds, without cessation, unless engaged in conversation or swallowing, when she can suppress it for about seven or eight seconds; it always occurs at least ten or twelve times every minute. It is an expiratory sound like the "ha" of people when they want to express derision. By its frequency breathing is quickened, as the patient always takes an inspiration, and occasionally two inspirations and one expiration, between every two coughs; otherwise nothing abnormal can be detected about the respiration. The pulse is 120, weak and nervous; temperature (taken in the mouth) 100½°. She complains of pain in the back, especially on sitting for any length of time; and, on examination, three or four spots sensitive to slight pressure were found along the spine, the most acutely painful being in the lower lumbar region. This back-ache she has had, however, for many years before the vocal hack came on. She also has had melanotic discoloration in small spots on both her hands and feet since early childhood. She does not sleep well, waking up several times during the night. Her appetite is exceedingly poor; bowels inclined to constipation. Menstruation has always been regular and normal. There is no organic disease discernible in either lungs or heart; the upper air-passages show anæmia and some little congestion. With the laryngoscope the arytenoid cartilages are seen to approximate with a rapid spasmodic movement which marked the peculiar vocal phenomenon; and with the hand placed upon the abdomen, a synchronous jerking contraction of the diaphragm can be felt. Electrical reactions carefully investigated—with the advice, and on one occasion the personal aid, of Dr. Neftel—threw no further light upon the case. To prevent, if possible, the continuance of any possible morbid pressure, I consulted Dr. E. Banning, who applied one of his braces, which the patient continues to wear every day with great benefit to her back, but no influence upon the peculiar cough.

Although I do not intend to lengthen this recital of curious cases by detailed description of the treatment pursued, I cannot refrain from adding that after the failure of internal medication by sedatives, antispasmodics, and narcotics, and of electricity, both faradaic and galvanic, singly and combined, applied internally and externally in various ways, this strange cough has been cured by local treatment of the slightly-congested faucial and laryngeal mucous membrane with sol. iodine and hypodermic and hypophlegmymenic injections of morphine.

(To be continued.)

TRANSLATIONS.

RENAL TUBE-CASTS IN ICTERUS.

IN the examination of a case of simple icterus catarrhalis in a young man of previous good health, Professor Nothnägel (*Deutsches Archiv für Klinische Medicin*, October, 1873) discovered in the urine a quantity of perfect casts; and as the subsequent fading of the jaundice from the skin, under an entirely expectant treatment, was attended by a diminution and final disappearance of the casts, some pathological connection between the two phenomena was naturally supposed to exist. Since that time he has investigated the subject, and from the personal examination of a large number of cases of icterus draws the following conclusion: "*Whenever the jaundice becomes comparatively intense, independently of its anatomical cause, casts appear;*" to which he adds, "*if the urine at the same time contained the biliary acids.*"

Leaving out of the question cases complicated with renal disease, the fact that casts could appear in some cases of icterus is already known, but was always considered as an accidental appearance, or at the most was described as an occasional symptom of acute yellow atrophy of the liver. For instance, Bamberger does not refer to it at all. Frerichs says that "here and there a small amount of albumen would be temporarily found," but does not mention casts. Only Leyden, in comparing icterus gravis and acute hepatic atrophy with the production of the bile-acids, observes, "The urine, also, in both cases shows the same alteration: it contains albumen and casts." No one has suspected casts in other varieties of icterus.

He states that these abnormal elements can be proved to exist in icterode urine, *as a rule*, whenever the jaundice becomes intense. He therefore wishes to class this with the more constant symptoms of icterus, such as pruritus. This has escaped notice hitherto because the urine of jaundice-patients is rarely carefully examined, especially if there is no albumen present; even if it were, the casts are sometimes in such small numbers that they would escape ordinary observation.

The cases in which casts were found were principally icterus catarrhalis; also in jaundice following gall-stone colic, or consequent upon compression of the common bile-duct by a neoplasm; in pyæmia, in a case where closure of the mouth of the gall-bladder existed; and, finally, in a case of bilious pneumonia. In all of these the jaundice was of high grade, and the skin intensely yellow. The urine always gave a positive bile-pigment reaction; acid; specific gravity 1.010 to 1.020; deposited urates on cooling, and became entirely clear. In several cases, especially that of pyæmia, the presence of the biliary acids was established by Pettenkofer's test.

In the cases where casts could not be found, the icterus was slight; either it had never been of a high grade, or was already declining when the patient came under observation.

The quantity of the casts varies, in some cases being numerous, in others requiring from four to six preparations to discover two to three casts. This shows that a negative result should not lead us to form a hasty conclusion. The variation seems to be in proportion to the extent of the icterus; the more marked this, the more numerous the casts. In the great majority of cases they were hyaline, and occasionally contained a few, or sometimes numerous, small, glistening, yellow granules (fat?); or there rested upon them one or more bright-yellow epithelial cells from the tubuli, or a few white blood-cells likewise tinged with yellow. Exceptionally, these were all present. Not so frequently as the hyaline, but also not rarely, unmistakable epithelial casts appeared, consisting of closely-crowded kidney-epithelium, also stained. In most of these a hyaline base could be recognized. Only very exceptionally were casts seen to which the name "fibrinous" could be applied; these were colored, and bore, here and there, epithelial or white blood cells. There were also found large bladder-cells, leucocytes, and kidney-epithelium unconnected with the casts. An important point is noticed in reference to the casts: although the urine and all the other elements were strongly tinged with the bile-pigment, *the hyaline casts were always entirely colorless.*

In about two-thirds of the cases there was no response to the usual test for albumen. To ascertain if it was present in some modification, a quantity of the urine was largely diluted, treated with alcohol, and the precipitate incinerated on platinum; there was no swelling of the substance, but it steadily diminished under the increased temperature: the conclusion may then be adopted that no albumen whatever was present. In some cases this absence was in marked contrast with the number of casts found.

The occurrence of casts without albuminuria, although always a rare and interesting fact, has been before noticed. Griesinger and Rosenstein have reported such cases; and Key saw hyaline casts when the kidneys were entirely normal.

That when these casts occur in jaundice they are connected with it, is evident. Although no previous examinations were made, yet the manifest relation existing between the intensity of the icterus and the number of these abnormal elements, the fact that both disappeared under an indifferent treatment, the patient's (icterus catarrhalis) previous good health, the absence of albuminuria—all lead to one conclusion, and exclude the supposition of co-existing kidney-disease. A febrile origin cannot be urged in explanation, because in some cases fever was entirely wanting.

The biliary acids then suggest themselves as the exciting cause of this abnormity. How they produce the changes in the kidney or cause the appearance of the casts need not be discussed, but that they will do so may be accepted as a fact from the experiments of Leyden, who, having injected a considerable quantity of these acids into the veins in several experiments, observed albumen and casts in the urine.

That there is a direct dependence of the constant appearance of tube-casts in intense icterus upon the bile-acids is evident, but as to the details of this connection no hypothesis is ventured.

FRANK WOODBURY, M.D.

KOUMYS (*The Irish Hospital Gazette*, December 15, 1873).—An establishment has been opened near Vienna for the "koumys cure" of lung-diseases, or the treatment of such diseases by the use of mare's milk in the process of fermentation. The cases which have proved most suited to this treatment are those of chronic phthisis, when there is great wasting of the body, and when the indication is to increase the weight and general strength of the patient. In such cases, it is said, koumys seems to work wonders, increasing the quantity of urine, lessening the night-sweats and the tendency to hæmoptysis, and changing the type of the disease from the more acute to the more chronic form. The quantity for an adult to begin with is two half-bottles per diem, increasing this dose by a half-bottle each day until the measure of three or four bottles is reached. The patient should live almost exclusively on koumys.

ALBUMINURIA AS A SYMPTOM OF MENINGITIS (*Medical Press and Circular*).—Professor Rosenstein has noticed the coincidence of albuminuria with meningitis. The analysis of their urine demonstrates in nearly all patients, whether old or young, attacked with meningitis, the presence of albumen in the early days of the cerebral affection; and in a considerable number of these cases there are found at the same time, among the products of the renal secretion, epithelial cells, blood-globules, and fibrinous casts, exactly the same as in Bright's disease. The lesions discovered by post-mortem examination of the kidneys are likewise similar to those of albuminous nephritis. The kidneys are increased in size, the hypertrophy being chiefly in the cortical substance; the renal tissue is markedly injected, the glomerulæ are gorged with blood, and there are extravasations of blood into the urinary tubules. Professor Rosenstein attributes these lesions to troubles in the circulation, due to functional alteration of the vaso-motor nerve-filaments. This fact is likely to be of considerable value in diagnosis.—*Lyon Méd.*

PEPSINOMANIA (*The British Medical Journal*).—We learn from a report in the *Chemist and Druggist* that Dr. Schacht, a councillor and recently president of the Apotheker-Verein, lately read a paper on *Pepsin and Schering's Pepsin Essence.* He showed that pepsin only dissolves albumen in the presence of free acid, but that a given small quantity of pepsin will effect the solution of any given larger quantity of fibrin, on the same principle as a small quantity of sulphuric acid acting upon alcohol will continue to produce ether. Further, he showed that when the limits of its dissolving capacity are attained, yet by dilution with water and further addition of acid more solution will be effected. He also maintained that a stomach had never been found without pepsin, that the natural pepsin was never entirely destroyed by the process of digestion. From this he concluded that the administration of the artificially-obtained product could only be a work of supererogation. It is evident, also, from these premises, that the value of a pepsin cannot be estimated by the quantity of fibrin which it will dissolve, but by the time it occupies in dissolving it. Dr. Schacht's experiments also went to prove that wine or alcohol were the worst possible vehicles for the administration of pepsin. It was probable that the tannin of wine almost entirely hindered the catalytic action of the pepsin. Some experiments were shown to prove that it is much more effective if dissolved in water. Of course, in either case hydrochloric acid is necessary. Dr. Schacht chastised the "pepsinomania" in England, and referred to such preparations as Mr. Lorimer's sauce, which, however, was, he thought, preferable to the pepsin essences or wines. The speaker concluded that the administration of pepsin or any of its preparations was altogether unscientific, on the ground that no stomach had yet been observed in which the remedy was already absent.

SPONGE-TENTS (*The British Medical Journal*, November 29, 1873).—Mr. Lawson Tait believes that by soaking sponge-tents in oil of cloves they will be made more agreeable to the patients, and at the same time there will be much less risk of their causing septicæmia and peritonitis.

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MEDICAL TIMES.
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MEDICAL AND SURGICAL SCIENCE.

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EDITORIAL.

OUR CRIMINAL INSANE.

GOVERNOR HARTRANFT deserves the thanks of the friends of humanity and justice, as well as of the lovers of the fair fame of Pennsylvania, for his well-meant and cordial appeal to the Legislature in behalf of the so-called "criminal insane." We regret that he did not call their attention to a yet wider field: to the equally pressing claims of the far more numerous class of the insane poor, who are incarcerated in the poor-houses, as well as the prisons, of the State. But we cannot resist the conviction that this portion of his message was written under some misapprehension of the actual state of the case, even in respect to the particular class referred to. It is with unfeigned diffidence that we venture, and with much regret that we feel constrained, even in appearance, to controvert or criticise any of his positions. But the claims of truth and right are paramount, and we are sure that no one will be more ready than Governor Hartranft to correct any mistakes into which he may have been led by inaccurate or partial representations.

We doubt not that the State hospitals for the insane deserve much commendation, and are doing a good work for the State in many respects. But the "plea" in behalf of the insane poor of this commonwealth recently put forth by the Board of Public Charities,* and which will be embodied in their annual report to the Legislature, has, we think, by its array of facts, and by the concurrent testimony of the judges of our courts and the inspectors and wardens of our penitentiaries, put it beyond all question that those hospitals, and particularly that at Harrisburg, have not been accomplishing, to the extent that might reasonably be required of them, the *purposes for which they were by the State designed*, —the reception, care, and treatment of the *insane poor*. Hundreds upon hundreds of these are pining in the poor-houses and prisons of the commonwealth, while one of these hospitals has had, and still has, from one-half to two-thirds of its inmates *paying patients*. The county authorities are not invited

* As the "Plea" may not be seen by some of our readers, the following extracts are appended to show the importance of the subject to which we have to-day allotted so much space. Evidently some of the missionaries sent by our Christian philanthropists to Barbary and Algiers should be recalled for the benefit of the heathen in central Pennsylvania.

"In February last a visit was paid this almshouse, and an insane inmate was seen,—a young woman over twenty years of age, whose whole dress consisted of a thin chemise with short sleeves, a single skirt, and a pair of shoes. When brought before the visitors, a borrowed cloak was thrown over her shoulders. She was blue with cold, and utterly filthy in person. Her cell had the appearance of having undergone a recent hasty washing, but was pervaded with an odor loathsome in the extreme. On the day of this visit the thermometer fell to 14 degrees.

"In March another visit was paid to the institution by several gentlemen in a body. Only one portion of the building was visited, which is supposed to be devoted exclusively to women. In one cell was a young woman,—the one already referred to. Her cell was without any furniture whatever, her bed consisted of one blanket, her clothing a ragged chemise open to her waist, and one scanty skirt and a pair of shoes. She was indescribably unclean, and alive with vermin. Her cell reeked with a sickening odor, the result of a total absence of all conveniences for cleanliness. She shivered with cold while in the presence of her visitors; the thermometer standing, at the time, several degrees below the freezing-point.

"Opposite to the cell, which we have very faintly described, was another. The short day had already faded into dusk, and as the light was thrown through the little aperture in the door, it fell upon two wretched women, both of whom were absolutely without a single garment to cover them. One of the poor creatures sat crouching in the corner with a small blanket drawn across her shoulders, while the other was crawling on all fours on the floor, without even this poor apology for any remnant of human decency! There was not a particle of furniture in the cell; and there, on this wintry March night, in an atmosphere which the witnesses declare to have been utterly horrible, were these two human beings, brought down far below the level of our domestic brutes.

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"Insane totally neglected, morally, physically, and medically; less attention is given to them than would be given to the lowest animals; four are incapable of self-care, confined in filthy cells; one, a female, has great neighborhood notoriety from sad incidents connected with her history. Known as an intelligent, esteemed, and attractive young lady, the daughter of a well-known inhabitant of the neighborhood, she fell a victim to the arts of the seducer. Insanity is alleged to have been caused by her disappointment. This occurred twenty-one years ago. The sad case is rendered still more painful by her present forlorn condition. A bed of straw, upon a damp, dirty floor, into which the external light can find no entrance, is the only furniture. A seat, a chair or a bench, has apparently never been furnished; the consequence of which is that the muscles of the lower extremities, from the cramped position in which she was always found, have become permanently contracted, so that the only movement of which she is capable is one similar to that of a frog.

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"Twenty-two insane; twelve are kept in close confinement, some in chains; one always chained to the ceiling to prevent him from tearing his clothes; some entirely nude; at least six with straw litters; not one of the twelve was ever removed into the open air. All confined in apartments opposite each other, a narrow corridor extending between them. The effect of this close proximity was to make the day and night hideous with the distressing shrieks and yells of the wretched and maltreated madmen."

and encouraged to send their insane to the hospital, except a few of the more recent cases. Indeed, it is understood, as we are informed, that the hospital at Harrisburg will receive no cases from the county authorities if they have had the malady beyond six months. The judges of the courts are deterred and debarred from sending those acquitted of crime on the ground of insanity, especially those of the more dangerous class, or those acquitted upon the charge of the graver offences, or whose disease is not "speedily curable," because the hospitals are already crowded (crowded, observe, chiefly with "paying patients"), and because the hospital authorities can summarily remand any of the less curable cases to prison. The fact is that the anomalous power just referred to, given to the hospital authorities by the law of 1861, has resulted in defeating, to a very large extent, the wise and beneficial purposes and provisions of the law of 1845, under which the first State lunatic hospital was established,—established for the very ends and objects which appear to have been disregarded in its administration. We make these statements with sincere reluctance, and not because we have any emotion of unkindness towards any individual connected with its management. On the contrary, we are quite sure that the medical superintendent is an amiable and estimable gentleman, and a skilful physician in his chosen department of medicine, and we know that the trustees are highly honorable and conscientious; but we make them because we feel keenly the grievous wrongs of the poor, helpless unfortunates, in whose behalf we would join in the earnest memorials of the judges of the courts and other eminent citizens, lay and professional.

The "plea" of the Board of Public Charities is a document of considerable length, and has just been issued from the press. We presume that Governor Hartranft had not read it when his message was prepared. We think that no one can read it with candid consideration without being convinced that the system of management of our State hospitals for the insane, in respect to the reception and retention of patients, and the provisions of our laws for the care and treatment of this class of sufferers in general, require to be thoroughly revised and reformed.

As to the memorial of the committee of the Medical Society of Pennsylvania, signed by the chairman, the superintendent of the Harrisburg lunatic hospital, one is not surprised, considering the respectable source from which it emanates, that Governor Hartranft should have presumed it to be worthy of unhesitating confidence and consideration, and should have been led to a quasi-adoption of its suggestions without a careful scrutiny of their bearing and character. But we trust that, before acting upon the subject, the Legislature, as well as the Executive, will give this "Memorial" a thorough scanning and analysis.

It proposes, at the outset,—and so Governor Hartranft apparently understood it,—to consider the *general case* of the "Criminal Insane;" and yet it makes at last the lame and impotent conclusion of a mere suggestion of legislative provision for the better care and treatment of only a small fraction of these: viz., "insane convicts," endorsing, with respect to this comparatively insignificant portion, the resolutions adopted by the Association of Medical Superintendents at Baltimore. This is the only action, the only legislative reform, it proposes. But as the laws of this State, and the practice under them, now stand, the claims of insane convicts to relief, as compared with those of other classes of "insane criminals," so called,—whether we consider their respective numbers or the hardship or injustice of their present treatment,—are as nothing. It is not the score or so of insane convicts, but it is the multitude of those who, in a state of insanity, have committed, or are liable to commit, what are called crimes, but who are morally irresponsible for their acts,—it is these who are suffering unspeakable wrong, and whose wretched condition demands the immediate attention of the Legislature. The "Memorial" declares that for these last "the law provides full and adequate means of relief; that they shall be placed in hospitals built and arranged for their care and treatment until they should be restored to their sound minds." It then coolly assumes that these "means" are effectual, that all this class are actually thus taken care of; and it proposes no legislation, no measure of enlargement or improvement of the "full and adequate means of relief" thus provided for them. Would not every unguarded and simple reader of this "Memorial," considering, as we have said, the respectable source from which it comes, presume that all this class of insane among us were duly cared for in our State hospitals? Would he believe, would he imagine it possible, that there should be at this moment, in the commonwealth of Pennsylvania, numbers of this class of irresponsible "insane criminals" raving and rotting in the cells of our prisons and the dungeons of our poor-houses, and that our criminal judges and magistrates should feel obliged from day to day to commit such helpless sufferers to a hopeless incarceration in such abodes of misery? Yet such is the fact; and it is one of the foulest blots upon the honor of our State. Does any one doubt it?

Let him read the "plea" of the Board of Public Charities, and his doubts will be removed.

And now, whose fault is it? Is it the fault of the judges? Is it the fault of the hospitals? Is it the fault of the law? One of these, it would seem, it must be, if there is any fault at all. As to the judges, read their statement and memorial, contained in the "plea," and no doubt they will be exonerated. The fault, then, must be either with the hospitals or with the law, and then, in either case, it comes back upon the hospital authorities; for the present state of the laws upon which the evil might be charged has been brought about by their procurement; and they have never asked any amendment of the law in this regard, but rather have obstructed any such amendment; just as this "Memorial," which betrays the inspiration of a hospital superintendent, makes not the slightest suggestion of any change of the law in relation to this subject, but expressly declares its provisions to be "full and adequate for the relief" of this class of lunatics. We leave to others to characterize as it deserves a "Memorial" professedly put forth in the interest of humanity and in behalf of this particular class of sufferers, but which coolly abandons the helpless and innocent to their present fate, under the "full and adequate provisions" of the law,—a fate and a law which some of its authors have had a principal hand in securing,—and then covering its retreat with a lame suggestion of some doubtful relief for a dozen or two of "insane convicts." But meanwhile it cannot be too emphatically asserted and insisted on that, next to adequate provision for the "insane poor" in general, the great point to be urged upon the attention of the Legislature is, not the case of "insane convicts," but that of those innocent lunatics who, by an abuse of words rather singular, though easily explained, are commonly called "*the criminal insane.*"

We follow this "Memorial" to another point, of less importance. Although, in the end, it seems obliged to admit that some relief should be provided for "insane convicts," it takes pains to blacken their character as much as possible on the way, and to arouse as strong a prejudice as possible against their claims. Even the horrible doctrine that insanity may be regarded as a part of their penalty is coolly endorsed. "They have every reason"—such are its words—"to look upon the insanity as a part of the penalty which their crimes have brought upon them, and cannot complain if society should so regard it and act accordingly." But by whose sentence or act is the penalty inflicted? What does the "Memorial" take society to be composed of? of fatalists or savages? It may be true that the poor lunatics, who receive from the hand of Providence no more than a just punishment for their crimes, have no right to complain if society regards and treats them accordingly; but reason, justice, humanity, decency, have a right to complain, and to set the seal of their emphatic condemnation on such an infamous, not to say blasphemous, suggestion,—a suggestion which, so far as it possesses any plausibility, has been anticipated, analyzed, and demolished in the "plea" of the Board of Public Charities.

Having described, and very properly described, the first class of so-called "insane criminals," the irresponsible or innocent class, the "Memorial" adds, "The other class consists of those who, having led a life of crime, having been at war with society all their lives, and being in constant violation of the laws of God and man, are at some point in their career arrested by the strong arm of the law and confined in prison. After a time they may become insane, and need care and treatment." Between these two classes it recognizes no gradation, no intermediate cases: all "insane convicts" are regarded as coming under this last description. Now, that there may be some of this character is not to be denied. But that, even of "insane convicts" as a class, it is a false and slanderous description, must be evident to any one who will read the reports of the inspectors and wardens of penitentiaries which are given in the "plea" of the Board of Public Charities. They show that by far the largest proportion of even "insane convicts" were probably insane before the commission of the acts and crimes for which they were convicted; and of the rest it is far from being true that, as a rule, it is the worst and most hardened criminals that are the most likely to become insane. As to their demeanor while under confinement or treatment, the testimony of those in charge of them is surprisingly to their advantage.

Dr. Compton, Superintendent of the State Lunatic Asylum of Mississippi, says, "My own experience with insane criminals" (the connection shows that he means "convicts") "leads me to feel rather charitably towards them."

Dr. Shaw, Superintendent of the General Hospital for the Insane, Middletown, Connecticut, says, "In practical experience, I have not found that 'insane convicts' are particularly objectionable in themselves. . . . Twelve insane convicts have been transferred from Wethersfield to Middletown; two of that number escaped, one of them having feigned insanity. Of the ten others, seven have been among

the most valuable farm-laborers,—harmless, industrious, and peaceable, and yet positively insane. They are generally liked by the patients, and are not more troublesome than others."

Dr. Earle, of Northampton, Massachusetts, says, "I would put the 'convict insane' in a separate institution, independent of all other institutions. I would *put in the same place* those who have been tried and acquitted of crime on the ground of insanity; then those incendiary and homicidal patients who never have been tried for crime. . . . Our most dangerous patients *are not convicts*, and have never been tried and acquitted of crime on the ground of insanity."

But, at all events (the "Memorial" urges), insane convicts are too bad to have a department provided for them in connection with any general hospital, because, in the first place, they will escape; for most of those who were sent to the Harrisburg hospital some years since soon made their escape.

It is true that, for some reason or other, they did manage to escape from the Harrisburg hospital. But have they escaped from the Dixmont hospital? Have they escaped from the Connecticut hospital? Have they escaped from the Mississippi, the Maine, or the Massachusetts hospitals? If really insane, it is not easy to see how they could make their escape permanently good, or, if they did, what great harm there would be in it; for apparently they must, in that case, be practically cured of their insanity, so as not to be capable of identification as insane persons. But, as a general rule, *they have not escaped.* The case at Harrisburg does not make the rule. Why they should be more likely to escape from the Harrisburg hospital than from any other, we leave for others to answer. If the prisoners escape through neglect of the keepers, the fact of the escape is not a good plea. It is a sound principle of reason that no man can plead his own wrong in support of his cause.

But, in the second place, it is urged that it is a hardship upon the other inmates of the hospital to admit "insane convicts" into association with them. The simple answer is, they might be admitted to a special and separate department in the hospital, without any such association; and this is really all that has been proposed.

In the third place, it is alleged that when "insane convicts have been admitted to general State hospitals it has been against the protest of the superintendents." Sometimes this has been so, and naturally enough; but it is by no means universally true. Dr. Compton, of Mississippi, in expressing his decided opposition to the doctrine that "under no circumstances should 'insane convicts' be permitted to associate with other insane persons," added, with emphatic earnestness, "I would take them into my asylum rather than let them remain in the penitentiary or jail. In the absence of the proper provisions, I would take them out of the penitentiaries and jails and put them in my asylum." And such we understand to have been the almost universal sentiment of the superintendents of insane asylums in their late session at Baltimore, with the exception of some of those from Pennsylvania. An entirely separate provision for "insane convicts" was undoubtedly preferred as the best,—the ideal plan,—where such an establishment could be afforded; but, unhesitatingly, they would welcome these unfortunates to their asylums, rather than have them left incarcerated in prisons. In Pennsylvania almost alone have they been left to this hard fate; and here they have been so left because the State hospital "refused to receive them." "I would take them into my asylum," says Dr. Compton. "Let them rot in prison first," has been the voice from Harrisburg.

In the fourth place, it is alleged that New York has established a special hospital for "insane convicts," *on prison grounds.* Yes, but then most of the other classes of the "criminal insane"—the innocent and irresponsible—are consigned to the same hospital,—consigned to a prison-hospital,—a course contrary to all generous and humane sentiments, contrary to the strongly-expressed convictions of an apparent majority of the medical superintendents of Baltimore, contrary, even, to the suggestions of the "Memorial" itself; for, in the end, it concludes with a mere endorsement and reproduction of the resolutions of that convention, from which all approbation of the New York plan had been carefully eliminated. But it is not likely that New York would establish and support a separate hospital, with such full provision as is made for that at Auburn, simply and exclusively for her "insane convicts;" and that is what this "Memorial" seems to propose that Pennsylvania should do.

Finally, it is alleged that such separate hospitals have been established in Great Britain and Ireland. But there the number of "insane convicts" (being in some proportion to the population) is so great as to authorize the establishment of entirely separate hospitals for their treatment; and this would unquestionably be the best course for us if the State could reasonably afford it. Our "insane convicts" ought by all means to have provision made for their proper care and treatment. But, while the number is so small, we think the Board of Public Charities

has demonstrated that the cheapest, most feasible, and withal most reasonable and appropriate, arrangement for the State, is to provide, in the first place, a special department in connection with one of the State hospitals for the "criminal insane," so called, who are now languishing in our prisons and poor-houses; and then, with proper arrangements for such a degree of personal separation as may be thought best, to admit temporarily to this department "insane convicts" also, for treatment *while they remain insane;* temporarily, we say,—*i.e.*, until it is thought that the State should incur the expense of a fully-appointed hospital for their exclusive accommodation.

But if the proposed special hospital is to be placed on prison grounds,—to be made a department of a penitentiary,—then must we protest against sending to it the other classes of the "criminal insane," the innocent and irresponsible, who have never been tried for any crime, or, if tried, have been acquitted. We protest in their own name, in the name of their friends, in the name of the whole community, and in the name of reason and humanity itself. What we demand of the Legislature is that, first of all, for these the law should make "full and adequate provision" in a real and practical, and not a Pickwickian, sense,—a sense very different from that of this "Memorial,"—a sense which will not leave them, as that does, in the cells of our prisons and poor-houses, to languish out a hopeless existence of unspeakable and inconceivable horror. We would not have the "insane convicts" neglected—far from it; but we say again, it is for this other class, and not for "insane convicts" proper, that relief is first of all demanded of the Legislature.

And even if a special hospital for "insane convicts" exclusively be thought advisable, we see no reason in the world why it should be placed upon prison grounds rather than elsewhere, unless the State is to incur the expense of such a hospital for each and every prison; and if this is what is intended and proposed by the "Memorial," it does not appear that, after all, it would be a great improvement upon the present state of things. It might be some alleviation.

But again and again we implore the Legislature not to forget that other and far greater suffering class of the innocent victims of the law who are abusively called the "criminal insane;" and still less the yet larger class of the wretched *insane poor*,—now, with a grim mockery of humanity, consigned for safe-keeping to the poor-houses and prisons of the State.

CORRESPONDENCE.

To the Editor of the Philadelphia Medical Times:

In two numbers of your journal you have held up to professional condemnation the practice which has prevailed of having the names of the surgeons and physicians elected to the hospitals published in the newspapers. You aver that this gives to those gentlemen a great advantage over other medical men of equal skill and ability. This may be true; and yet I can hardly think the physicians and surgeons alluded to can be blamed for being thus announced at the time of election. Indeed, they could not easily prevent the ubiquitous reporter from publishing it. It is an item of news that belongs to him. But if after this first announcement it should be again published, either by themselves or by the managers with their consent or even their silent acquiescence, it would be advertising their skill, and would deserve your sharp and just criticism. If those gentlemen regard themselves as being in the first rank of medical men, it is incumbent on them to show an honorable example to those who occupy less prominent positions and yet are subject to the same code of ethics. As you have opened this subject, allow me to improve the opportunity to call attention to doings which I consider even more objectionable, committed thoughtlessly, no doubt, by prominent medical men of Philadelphia, for whom I have the highest respect,—men of unimpeached honor, incapable of meanness or trickery in the profession. I am, to speak frankly, glad of this opportunity, because it has been my fortune during the last three years to see two skilful and intelligent physicians in the interior of the State expelled from their society, and subjected to disgrace and pecuniary loss, for violations of the code of medical ethics less grave than those which I shall present.

In the early part of last summer, when your citizens were preparing to go to sea-side resorts, there appeared in the daily papers a letter from a prominent physician of Philadelphia, purporting to be the answer to an inquiry addressed to him by the proprietor of a large boarding-house at Atlantic City, in relation to the merits of that place as a residence for invalids or seekers after health. In this answer the physician alluded to gave at great length a glowing account of the great advantages, in a sanitary point of view, of that locality over all others on the New Jersey coast. I have not now the paper before me, and cannot enter into details. Suffice it to say that the article was extensively copied by other newspapers, with the name of the physician, and name of street and number of residence, and that the letter became the theme of conversation among those who contemplated a visit to the sea-shore, and the very important information which it was believed to contain was hailed by them as a true "God-send." Many turned their steps towards Atlantic City who had before preferred other resorts. I was impressed with the impropriety of the letter on first seeing it; but how was

that impression deepened when I afterwards learned that its author was during *the season* located there as a physician! Could any mode of advertising one's self be more efficient? I do not wish to speak harshly of it; my object is only to present it to the profession as a violation of the spirit, if not of the letter, of the code of medical ethics.

Again, during last summer, the Obstetrical Society of Philadelphia, feeling the importance of disseminating information among the masses in relation to the proper mode of caring for young children during the warm summer months, appointed a committee to draw up "rules" to guide parents and nurses in the management of infants and young children. The committee, composed of six of their number,—men who had had long experience in the treatment of children,—published for distribution ten thousand copies of those, in many respects, admirable rules, and threw them broadcast over the city. But I was grieved to see that their names were appended to the rules. I exonerate every one of them from any intention to gather advantage to himself from the act, but I ask what would be the probable effect of such a proceeding? Would not every anxious mother whose child should show symptoms of indigestion or of cholera infantum say, "One of those gentlemen of the committee would be the proper person to call to my sick child; they are *the* physicians of the Society, specially chosen to issue the address on account of their great experience in the treatment of the diseases of children; and especially those diseases which, from their known fatality, bring sorrow to thousands of homes"? Hundreds who perhaps had never before heard of some of them would thus be impressed with their superiority over all others, and would be inclined to seek their aid in those affections. Would not the rules have been as much respected, would they not have been as authoritative, if signed by "The Committee of the Obstetrical Society," or by its Secretary, as by those gentlemen? I think it was a bad precedent, and has already been productive of evil results. Cannot any physician say, If they can publish "rules," and send them all over the city with their names appended, why cannot I do it? And already we find that a committee is dispensed with, and a single physician issues "directions for the management of infants during the warm weather," signed by his name with title added. And those directions—very objectionable ones too, some of them—are sent broadcast after those of the committee. Surely this is quite as reprehensible as that you charge against the surgical and medical staff of the hospital. If you may publish "directions" or "rules" for treating "summer-complaint" and other diseases of *warm* weather, may not I publish my skill or knowledge in relation to pleurisy, pneumonia, and croup, and other diseases of *cold* weather?—ending with the pleasant and cheering advice, "If you are sick, send at once for a physician"? "And who knows more about the diseases of cold weather than the author of the directions?" would at once suggest itself to the sick man or his family. Were we to see papers such as I have noticed published by a committee of a homœopathic society, or by an individual of that faith, we should regard it as quite unprofessional, however innocent they might have been of any but the most philanthropic motives. It is most commendable to instruct the community in the art of health; but, in doing it, let it be done for the public good and in the interests of humanity alone.

I hope this article will give no offence to those to whom it refers. My desire is that we of the State shall have a proper example set us by those who so well know the letter and spirit of the code of medical ethics.

HIRAM CORSON.

PROCEEDINGS OF SOCIETIES.

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

JANUARY 5, 1874.

DIRECTOR W. S. W. RUSCHENBERGER, M.D., in the chair.

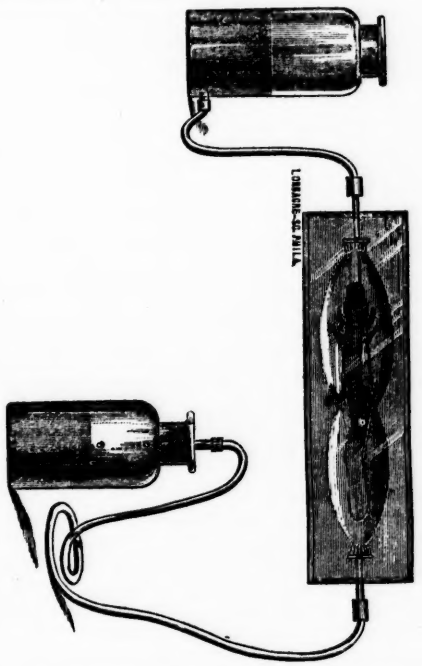
MR. HOLMAN'S "siphon slide" for the microscope was exhibited in operation by Dr. Joseph G. Richardson, who remarked that the apparatus was composed essentially of a strip of plate-glass, of the ordinary length and width (namely, three inches long by one inch wide), but double the usual thickness, in the upper surface of which had been ground a shallow groove, elliptical in both its transverse and longitudinal section, and deeper towards one extremity. The excavation was so arranged as to receive a small fish, tadpole, or triton, and retain it without, on the one hand, injury from undue pressure, but without, on the other, permitting any troublesome gymnastics beneath the thin glass cover, which, when applied, formed the ceiling of the cell. The great improvement of this slide consisted, however, in the imbedding of a small metallic tube (communicating with each extremity of the groove) in either end of the slide, and the adaptation to these two tubes of pieces of slender caoutchouc pipe, about eighteen inches in length, one of these being intended for the entrance and the other for the exit of any fluid, *cold* or *hot*, which it might be desirable to employ.

For examination of larger reptiles, and for demonstrations with the gas-microscope, a slide four inches long, with two oval concavities, and a narrow groove more deeply cut for the body of the creature, as shown in the figure, has been devised. With such an apparatus, through which a current of ice-water can be passed, the injurious heating effect which ordinarily attends the use of calcium or electric light to illuminate living specimens is entirely counteracted.

When in use, it is only necessary to place the animal (in the case before us a little triton) with some water in the groove of the slide, cover him with a sheet of thin glass, immerse the end of one of the caoutchouc tubes in a jar of water, and then, applying the mouth to the extremity of the other rubber pipe, make sufficient suction to set up a flow of the liquid through the apparatus. The stream of fluid (of course bathing the animal in the cell during its passage) can readily be kept up, as in any other siphon, for hours or days, and its rapidity exactly regulated by graduated pressure upon the entrance-pipe, so that in this way a triton may be examined continuously (as stated by Dr. J. Gibbons Hunt,

who had kindly furnished and prepared the slide and specimen) for a whole week without material injury.

Among the great advantages of this very ingenious contrivance may be enumerated—first, its security,—the animal being prevented from escaping, and the joints of the apparatus being kept tightly closed by the pressure of the atmosphere; second, its portability,—the whole preparation, for example, one for showing the circulation of the blood, being made at home,—as was done in this instance,—carried to a lecture-room in the pocket, and exhibited to an audience hours afterwards; and third, its convenience,—this arrangement permitting the removal of the slide at any time from the microscope-stage, to make way for other experiments, and its instant readjustment when desired.



Dr. RICHARDSON invited the attention of members to the remarkably clear and distinct view of the circulation displayed by the aid of this apparatus in the caudal extremity of a triton, beneath one of the microscopes upon the table, and pointed out as especially worthy of note the marked prominence of nuclei in epithelial cells covering a portion of the tail, where blood-stasis had occurred, in consequence of a minute puncture purposely made before incarcerating the reptile; suggesting that this change was doubtless the visible exponent of that pathological alteration of the circumjacent cellular elements which constitutes such an important, although as yet but imperfectly understood, factor in the inflammatory process.

GLEANINGS FROM OUR EXCHANGES.

TREATMENT OF LUMBAGO (*The Lancet*, December 27, 1873).—Dr. G. V. Poore reports the case of a man, æt. 35, who had the following history:

He had been accustomed to lathe-work, moving the treadle with his right foot, but had been unable to work for six years on account of a pain at first affecting the backs of the thighs and hips, but afterwards settling in the lower dorsal and lumbar regions. It was of a plunging, shooting character, much aggravated by the slightest movement, or even by the most gentle touch; he was bent almost double, and walked with the greatest difficulty. The intercostal muscles on both sides were affected, but there was no sign of any disease of the vertebræ or of the cord, and no particularly tender points were detected along the spinal column. He had been subjected to a great variety of treatments, but without any permanent relief having been afforded him.

The positive pole of a zinc-carbon battery was placed at the upper part of the spinal column in the median line, and the whole back, including the intercostal muscles, was sponged with the negative pole. During the application the patient was made to exercise his muscles rhythmically by bending, extending, and rotating the spine, and by frequent inspiration. The effects of this treatment were apparent from the first: the pain was immediately and greatly diminished, if not abolished, and in a short time all the extreme symptoms disappeared.

The important point was apparently the rhythmical exercise of the muscles, which improved their nutrition; but without the anodyne application of the galvanism such exercise would have been impossible.

RESUSCITATION FROM CHLOROFORM-NARCOSIS (*The New Orleans Medical and Surgical Journal*, November, 1873).—In the course of an extended experience in the administration of chloroform, it has happened three times to Dr. M. Schuppert that, to all appearances, the narcotized subject died,—that is, respiration ceased, the heart stopped beating, and muscular contractility became extinct. The method he adopted for resuscitating these patients consisted in reversing the body, either by hanging them up by the feet or laying them over a bed or table so that the greater part of the body with the head hung down. In that position artificial respiration was also tried. In one case five minutes elapsed before there was a natural inhalation. All of them recovered. Dr. Schuppert believes that in cases of death from chloroform the primary cause of the cessation of the respiration and circulation rests in anæmia of the brain, and not in impregnation of the blood with carbonic acid.

ACETIC ACID IN PSORIASIS (*New York Medical Journal*, January, 1874).—Dr. Buck, of Lübeck, says that by ordinary methods of treating psoriasis the eruption may be temporarily removed without difficulty, but no protection from relapses is afforded. He believes that in nearly all chronic cutaneous eruptions, and especially in psoriasis, an etiological treatment is impossible, and a permanent result is promised only by a consistent external treatment. He has obtained the best results from the use of acetic acid. After the epidermal growths have been softened and loosened by several warm baths and soap, the glistening scales are removed with a soft brush. At first a few points of the eruption are to be pencilled once a day, and this is to be repeated until the skin remains smooth and feels normal to the touch. There are never any scars left. The treatment lasts from four to six or eight weeks, and, properly carried out, is not followed by relapses.

PARACENTESIS THORACIS (*The Practitioner*, December, 1873).—Dr. Sydney Ringer publishes his notes on five cases of paracentesis thoracis, showing by them how slight a disturbance this operation causes and what immense relief it affords; showing also that the operation may be usefully employed in the febrile and non-febrile stages of pleurisy with effusion, and that during fever the fluid may be withdrawn by the aspirator and not accumulate again. In some cases of empyema it is suf-

ficient to withdraw part of the fluid by the aspirator,—the rest may disappear; so that it is not always necessary to lay open the chest in order that the pus may drain entirely away. In severe empyema the temperature may be normal, or scarcely at all raised; and in those cases accompanied by chronic fever the pus may be perfectly sweet.

CHOLESTERÆMIA (*The Medical Record*, December 1, 1873).—In a paper read before the New York Academy of Medicine, Prof. Austin Flint, Jr., discussed the condition which has been called cholesteræmia, and concluded that cholesterine is an excrementitious substance, produced chiefly by disassimilation or physiological wear of brain and nervous tissue; that it is taken up by the blood and carried to a special organ for its elimination, and that that organ is the liver. In the liver it is separated from the blood, and finds its way into the bile discharged into the small intestines, and is there changed into stercorine, which is discharged from the body at about the rate of ten grains each twenty-four hours. In certain cases of disease of the liver, accompanied by grave nervous symptoms, there is an accumulation of the cholesterine in the blood, giving rise to cholesteræmia.

MISCELLANY.

THE NEW HOTEL-DIEU.—An order in due form of law has been served upon the contractors for the construction of the new Hôtel-Dieu, to summon them to recommence work, which has been suspended for some time.—(*Various Journals.*)

We would prefer that the ridiculous edifice known as the Hôtel-Dieu should be utilized, whether for a post-office or for the administration of some other branch of public business. It is only necessary to visit the squat and crowded buildings, lacking both light and air, to be convinced that they will never make a good hospital.—*Le Progrès Médical*, December 13, 1873.

NEW FOSSIL MAN.—In the *Revue Scientifique* for December it is stated that a third skeleton of a troglodyte has been discovered by M. Rivière in the caves of Mentone. This new skeleton, judging from the various and numerous implements by which it was surrounded, lived at an epoch far more remote than that assigned to the skeleton now in the Museum of Paris. The instruments of warfare and other objects found with it, though composed of flint and bone, are not polished. They are only sharpened, and by their coarse execution appear to belong to the palæo-lithic age. On the upper part of the skeleton was a large number of small shells, each pierced with a hole, which appeared to have formed a collar or bracelets. No pottery nor any bronze object was found.—*London Lancet.*

REMOVAL OF GLASS STOPPERS.—It may not have occurred to every one—at all events, it is not noticed in any of our treatises on practical pharmacy—that the easiest way to take out a stopper which has become fixed in the neck of a bottle is to reverse the motion given to it when putting it in, that is, to knock the stopper from *right* to *left*. In most instances, when a stopper is fixed without the intervention of an adhesive substance, it is by turning it as one would drive a screw. The direction is almost invariably from left to right, and thus a thread is formed, which it is easier to follow backwards than to break.—*Canada Medical Record.*

GLYCEROLE FOR CHAPPING OF THE SKIN.—

℞ Oxide of zinc, gr. xx;
Tannic acid, gr. xv;
Glycerin, ʒix;
Tincture of benzoin, ʒss;
Camphor, gr. xv.—M.

—*Canada Medical Record.*

IT is stated that the total export of coffee from the island of Ceylon in the year 1837 was 30,000 cwts., valued at less than 100,000*l.* In 1870 the export was over 1,000,000 cwts., equivalent to fully three and a half millions of pounds sterling in the consuming markets. —*Food Journal.*

UNIVERSITY OF NEW YORK—MEDICAL DEPARTMENT.—Professor Henry Draper having resigned the Chair of Physiology in the University of the City of New York, Professor J. W. S. Arnold will lecture on that subject during the remainder of this session.

HEADACHE.—Dr. C. C. Vanderbeck recommends the use of ergot in headache; thirty drops of the tincture every half-hour until relief is obtained. He regards it as a very useful remedy, though not a specific.—*Boston Medical and Surgical Journal.*

NOTES AND QUERIES.

UNIONTOWN, PENNA., January 9, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—Biddle's Materia Medica (p. 294) gives the symbol for calomel as one equivalent of chlorine and mercury each, and says it is a protochloride of mercury; while Rand's Chemistry (p. 277) teaches me that corrosive sublimate is equal parts of chlorine and mercury, and that it is a protochloride.

By telling me, through your columns, which of the above is correct, you will much oblige

A MEDICAL STUDENT.

Answer.

THE difference in your authorities is due to the fact that the equivalent of mercury is sometimes considered as 100 and sometimes as 200. Although there are many arguments in favor of the smaller number, the latter has been more generally employed.

According to the new nomenclature, which makes the combining weight of mercury 200, calomel is the protochloride, and corrosive sublimate the bichloride.—ED.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

THE next conversational meeting will be held Wednesday, January 28, 1874, at 8 o'clock P.M.

Dr. William Goodell will make remarks on the rapid dilatation of the womb for the treatment of some uterine affections.

All regular practitioners of medicine are cordially invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JANUARY 13, 1874, TO JANUARY 19, 1874, INCLUSIVE.

CAMPBELL, A. B., ASSISTANT-SURGEON.—Assigned to duty at Fort Clark, Texas. S. O. 4, Department of Texas, January 8, 1874.